

Work Order ID 93422***93422***

Page 1

November-19-12 10:07:01 AM

Item ID: D2938-2

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Saddle RH Out, 206

Stop

NS2

Start Date: 11/15/12 Start Qty: 6.00

6

Cust Item ID:

Required Date: 12/07/12 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan: MLJDate: 12-11-12

Tooling: _____ Date: _____

Run

Start

NR1

QC:

Date: _____ SPC (Y/N): _____

Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
100		0.00							
100	HAAS CNC VERTICAL MACHINING #1								
HAAS I	Memo	0.00							
HAAS CNC vertical machine #1	Program part number and batch number.1-Inspect part number and batch number are programmed correctly.2-Machine Step No 1 of Folio and visually inspect as per dwg D2938 & attached Dimension Sheet 3-Machine Step No 2 of Folio and visually inspect as per								
110		0.00							
110	CONVENTIONAL MILLING MACHINE								
Mill Conv	Memo	0.00							
Conventional Milling Machine	Machine Keyway and inspect per attached dimension sheet								
120	QC1- Inspect dimensions to dimension sheet	0.00							
120	Memo	0.00							
QC									
Quality Control									

PO 12/01/04

6 \emptyset

FK 13/01/05

PO 12/01/04
FK 13/01/056 \emptyset PO 12/01/04
FK 13/01/056 \emptyset

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>			
			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>			
			Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>				
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data										
Equip/Tooling										
Operator										
Material										
Setup										
Other										
Process										
Supplier										
Training										
Unapproved										
FAULT CATEGORY										
Landing Gear	General									
	Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>					
	Centre Not Concentric to O/S <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>					
	Cracks <input type="checkbox"/>	Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>					
	Crushed/Crimped. <input type="checkbox"/>	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>					
	Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Part Moved <input type="checkbox"/>						
	Heat Treat <input type="checkbox"/>	Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>						
	Inspection Strip in Tube <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>						
	Ripples in Bend <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>	Other <input type="checkbox"/>						
	Torque Waves in Extrusion <input type="checkbox"/>	Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>							
	Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>							
	Wave/Twist in Tube <input type="checkbox"/>	Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>							

Work Order ID 93422***93422***

Page 2

November-19-12 10:07:01 AM

Item ID: D2938-2

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Saddle RH Out, 206

Stop

NS2

Start Date: 11/15/12 Start Qty: 6.00

6

Cust Item ID:

Required Date: 12/07/12 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC8- Inspect parts - second check

0.00

DAS
14
9-89

13/01/06

6 0

130

QC

Quality Control

140

Chemical Conversion Coat per QSI005 4.1

0.00

6 13-1-7

140

HandFinish

Hand Finishing

Memo

0.00

150

White Gloss(Ref 4.3.5.1) per QSI005 4.3-Alum

0.00

150

Powdercoat

Powder Coating

Memo

0.00

START TIME:

11:15

OVEN TEMPERATURE:

FINISH TIME:

11:45

6 13-1-7

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS						
Part No. _____	Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>					
NCR No. _____	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>	Quality <input type="checkbox"/>					
	Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Other <input type="checkbox"/>					
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
				Bending <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>				
Centre Not Concentric to O/S				BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>				
Cracks <input type="checkbox"/>				Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>				
Crushed/Crimped. <input type="checkbox"/>				Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>				
Cuffs <input type="checkbox"/>				Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Part Moved <input type="checkbox"/>					
Heat Treat <input type="checkbox"/>				Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>					
Inspection Strip in Tube <input type="checkbox"/>				Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>					
Ripples in Bend <input type="checkbox"/>				Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>		Other <input type="checkbox"/>				
Torque Waves in Extrusion <input type="checkbox"/>				Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>						
Turning Sequence <input type="checkbox"/>				Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>						
Wave/Twist in Tube <input type="checkbox"/>				Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>						

Work Order ID 93422

93422

Page 3

November-19-12 10:07:01 AM

Item ID: D2938-2

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Saddle RH Out, 206

Stop

NS2

Start Date: 11/15/12 Start Qty: 6.00

6

Cust Item ID:

Required Date: 12/07/12 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

160

QC

Quality Control

QC3- Inspect Part Finish

0.00

6x 13/01/08

170

Identify as per dwg & Stock Location:

5428

0.00

6x 13/01/08

170

Packaging

Packaging

Memo

0.00

180

QC21- Final Inspection - Work Order Release

0.00

ML5 13-01-08

180

QC

Quality Control

Memo

0.00

ML5 13-01-08

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS							
Part No. _____ NCR No. _____		<input type="checkbox"/> Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update	<input type="checkbox"/> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab	<input type="checkbox"/> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite	<input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier	<input type="checkbox"/> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear	General										
	<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain	<input type="checkbox"/> Ovalized	<input type="checkbox"/> Pressure/Forced						
	<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware	<input type="checkbox"/> Over/Under tolerance	<input type="checkbox"/> Temperature/Cure						
	<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete	<input type="checkbox"/> Part Incorrect	<input type="checkbox"/> Weld						
	<input type="checkbox"/> Crushed/Crimped.	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Lost/Missing	<input type="checkbox"/> Wrong Stock Pulled						
	<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance	<input type="checkbox"/> Part Moved							
	<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Positioned Wrong							
	<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread	<input type="checkbox"/> Power Loss/Surge							
	<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset								
	<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration								
	<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence								
	<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions								

Picklist Print

November-19-12 10:07:01 AM

Page 1

Work Order ID: 93422

Parent Item: D2938-2

Parent Item Name: Saddle RH Out, 206

Start Date: 11/15/12

Required Date: 12/07/12

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP: B 00.06.26 New DWG rev (mpp 2069)EC
IPP Rev:C As per Rev C 07-03-19 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-003 Saddle Billet, 7075		Manufactured	No			100	Each	80.0000	1	6	6	12/12/31	

Location	Loc Qty	Loc Code
MAT040	19	
73775	2	
73780	7	
78599	10	
80765	0	
MAT042	60	
91238	30	
92531	30	
MAT044	1	
73769	1	

93319

6

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: Date: .

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS					
				Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other			
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
				Bending	Bend	Grain	Ovalized	Pressure/Forced			
Centre Not Concentric to O/S				BOM/Route	Hardware	Over/Under tolerance	Temperature/Cure				
Cracks				Broken/Damaged	Inspection Incomplete	Part Incorrect	Weld				
Crushed/Crimped				Burrs	Instructions Incomplete/Unclear	Part Lost/Missing	Wrong Stock Pulled				
Cuffs				Contamination	Maintenance	Part Moved					
Heat Treat				Countersink	Mislabeled	Positioned Wrong					
Inspection Strip in Tube				Cut Too Short	Misread	Power Loss/Surge					
Ripples in Bend				Drill Holes	Offset						
Torque Waves in Extrusion				Drawing	Out of Calibration						
Turning Sequence				Finish	Out of Sequence						
Wave/Twist in Tube				Folio	Outside Dimensions						

DART AEROSPACE LTD				Work Order:	93422
Description: 206 Saddle, Outboard, Right side				Part Number:	D2938-2
Inspection Dwg: D2938 Rev. C				Page 1 of 1	

Inspect dimensions highlighted on inspection sheet drawing D2938 Rev. C and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
A	0.100	0.140		.108	.110	.110	.110		
B	0.100	0.140		.109	.113	.109	.112		
C	0.100	0.140		.112	.117	.117	.117		
D	0.210	0.230		.219	.220	.220	.220		
E	1.245	1.255		1.250	1.250	1.250	1.250		
F	1.245	1.255		1.250	1.250	1.250	1.250		
G	2.495	2.505		2.500	2.500	2.500	2.500		
H	0.510	0.515		.512	.512	.512	.512		
I	1.572	1.582		1.577	1.577	1.577	1.577		
J	2.495	2.505		2.500	2.500	2.500	2.500		
K	0.257	0.262		.258	.258	.258	.258		
L	0.312	0.317		.314	.314	.314	.314		
M	0.235	0.240		.237	.237	.237	.237		
N	0.100	0.140		.117	.117	.120	.120		
O	0.540	0.560		.551	.552	.551	.551		
P	0.490	0.510		.501	.502	.500	.502		
Q	3.715	3.725		3.720	3.720	3.720	3.720		
R	2.720	2.760		2.738	2.740	2.740	2.740		
S	0.240	0.270		.251	.252	.253	.252		
T	0.100	0.180		.135	.135	.135	.135		
U	1.625	1.635		1.630	1.630	1.630	1.630		
V	1.362	1.372		1.367	1.367	1.367	1.367		
W	0.316	0.321		.316	.316	.316	.316		
X	1.250	1.270		1.259	1.259	1.262	1.259		
Y	1.565	1.585		1.572	1.573	1.577	1.5745		
Z	0.178	0.198		.188	.188	.188	.188		
AA									
AB									
AC									
AD									
AE									
AF									
AG									
AH									
Accept/Reject									

Measured by:	70	FK	Audited by:	14
Date:	12/01/04	13/01/05	Date:	9-03 13/01/06

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.12.12	Reformat; Added Dim. X-Y, DT8683, DT8686, DT8690	KJ/RF	
C	07.03.21	Revised per drawing revision C	KJ/JLM	JK

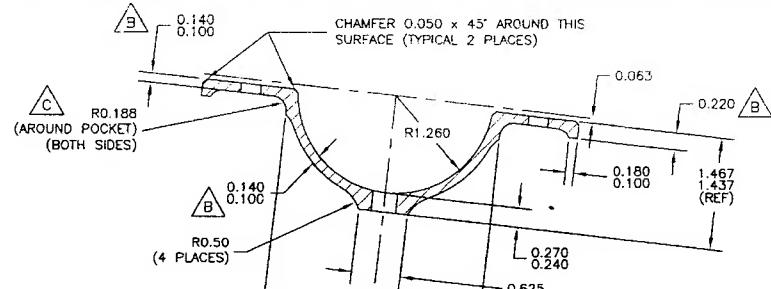
DART AEROSPACE LTD				Work Order:	93422
Description: 206 Saddle, Outboard, Right side				Part Number:	D2938-2
Inspection Dwg: D2938 Rev. C				Page 1 of 1	

Inspect dimensions highlighted on inspection sheet drawing D2938 Rev. C and record below:

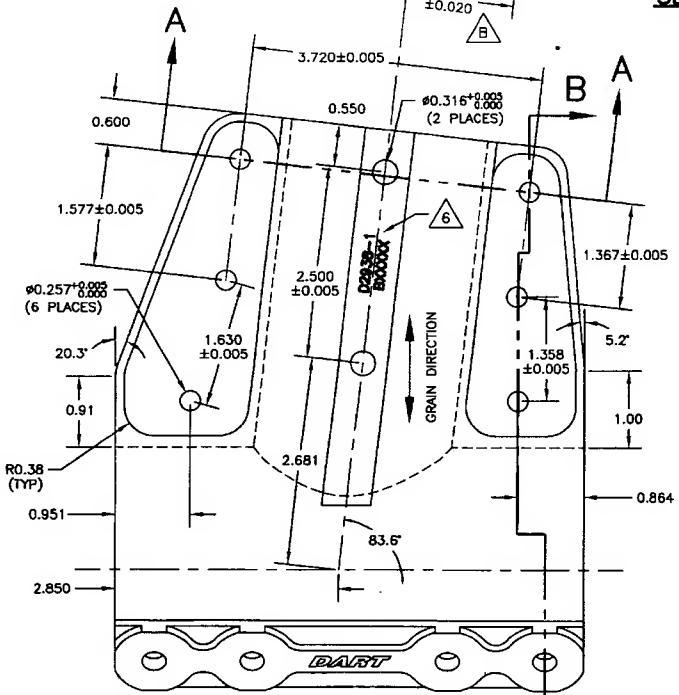
Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				5	6	3	4		
A	0.100	0.140		.110	.110				
B	0.100	0.140		.112	.113				
C	0.100	0.140		.117	.119				
D	0.210	0.230		.220	.223				
E	1.245	1.255		1.250	1.250				
F	1.245	1.255		1.250	1.250				
G	2.495	2.505		2.500	2.500				
H	0.510	0.515		.512	.512				
I	1.572	1.582		1.577	1.577				
J	2.495	2.505		2.500	2.500				
K	0.257	0.262		.258	.258				
L	0.312	0.317		.314	.314				
M	0.235	0.240		.237	.237				
N	0.100	0.140		.120	.123				
O	0.540	0.560		.551	.551				
P	0.490	0.510		.501	.501				
Q	3.715	3.725		3.720	3.720				
R	2.720	2.760		2.740	2.740				
S	0.240	0.270		.252	.253				
T	0.100	0.180		.135	.135				
U	1.625	1.635		1.630	1.630				
V	1.362	1.372		1.367	1.367				
W	0.316	0.321		.316	.316				
X	1.250	1.270		1.260	1.263				
Y	1.565	1.585		1.575	1.578				
Z	0.178	0.198		.186	.188				
AA									
AB									
AC									
AD									
AE									
AF									
AG									
AH									
Accept/Reject									

Measured by:	FK	Audited by:	14
Date:	13/01/05	Date:	13/01/06

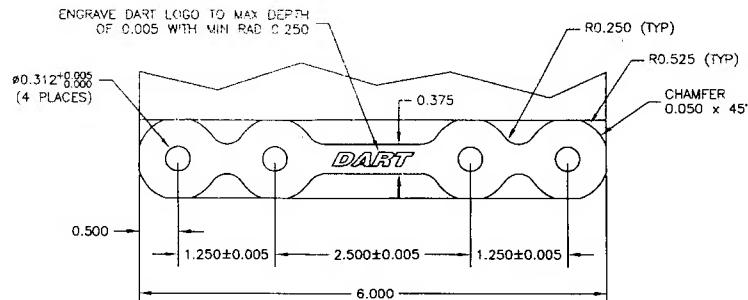
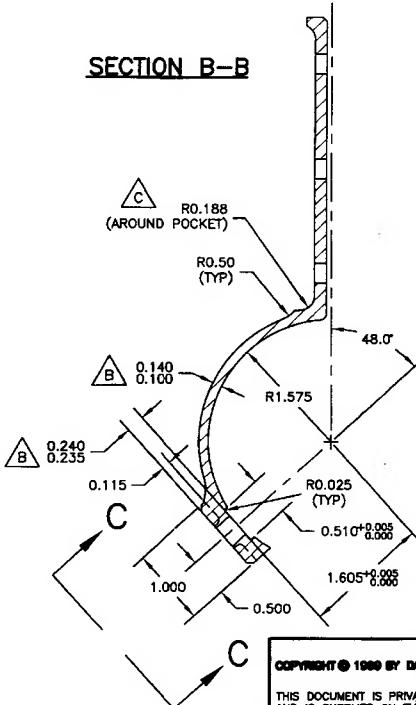
Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.12.12	Reformat; Added Dim. X-Y, DT8683, DT8686, DT8690	KJ/RF	
C	07.03.21	Revised per drawing revision C	KJ/JLM	20



SECTION A-A



SECTION B-B



VIEW C-C

D2938-1 LH SADDLE (SHOWN)
D2938-2 RH SADDLE (OPPOSITE)

NOTES:

- 1) MATERIAL: ALUMINUM 7075-T7351 (QQ-A-250/12)
(MAKE FROM D6101-003 SADDLE BILLET, 7075)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- 3) BREAK ALL SHARP EDGES 0.010 TO 0.020
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) ENGRAVE PART AND BATCH NUMBER IN THIS AREA 0.010 TO 0.015 DEEP

C	06.11.09	R0.188 WAS R0.30 TO R0.25
B	00.05.29	CHANGED GEOMETRY AND MATERIAL
A	99.11.12	NEW ISSUE
DESIGN	DRAWN BY	DART DART AEROSPACE USA, INC. BELLEVUE, WA
CHECKED	APPROVED	DRAWING NO. D2938
DATE	TITLE	REV. C SHEET 1 OF 1
06.11.09	SADDLE OUTSIDE	SCALE 2:3

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PERSON WITHOUT WRITTEN PERMISSION FROM
DART AEROSPACE USA, INC.

SH.
PL.
ENG.
UNCONTR.
SUBJECT: 12-11-20
WHT: 93422 MLS
NO. 93422 MLS
12-11-20